

PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON

NEW SPECIES OF THE CADDISFLY GENUS
POLYCENTROPUS FROM EASTERN
NORTH AMERICA (TRICHOPTERA, PSYCHOMYIIDAE)¹

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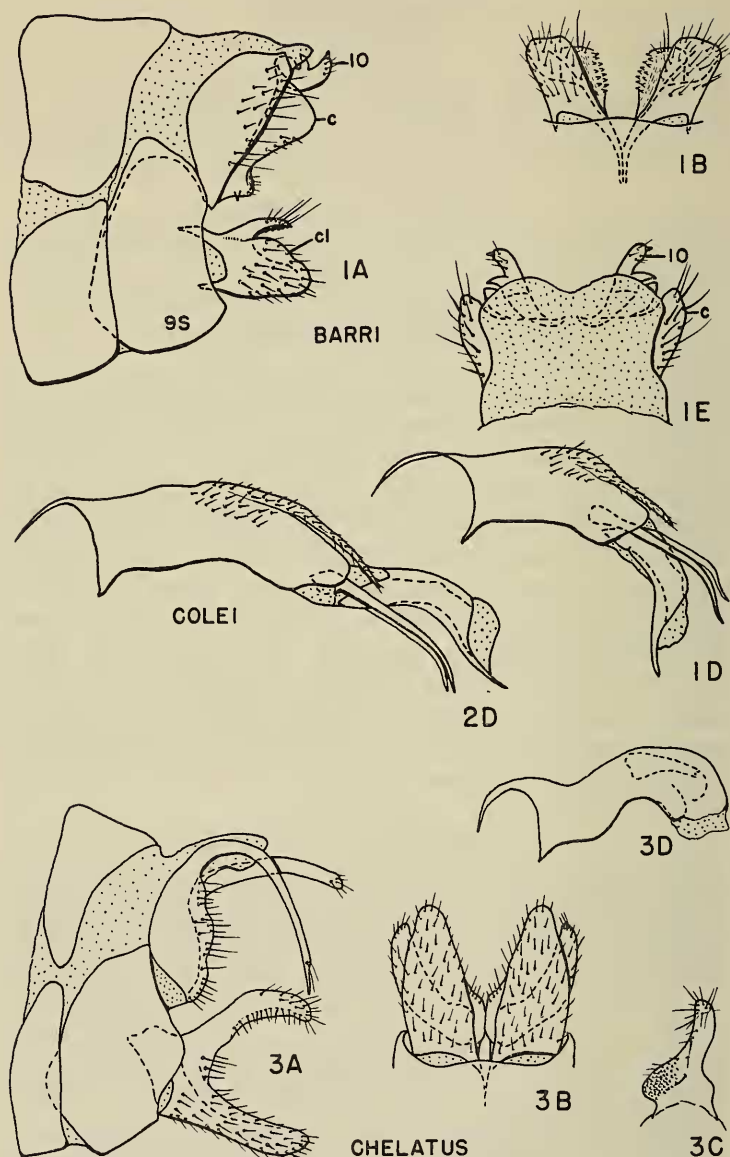
The following new species are remarkably uniform in size and color, in these respects resembling not only each other but closely related species with which they are compared. The following characteristics apply to all of them and will not be repeated in the individual descriptions: Length 8.5 mm. Color various shades of brown, semiobscure spots of lighter brown forming an irrorate pattern on the front wings; hind wings uniformly smoky; legs slightly lighter brown, the hind tibiae not markedly annulate. Venation, spur count, and other points of general structure typical for genus. To date no females have been associated with the males herein described as new species. Types of the new species are in the collection of the Illinois Natural History Survey.

***Polycentropus barri*, new species**

Male genitalia as in Fig. 1. Ninth sternite massive and wide. Clasper short and shallow, with a platelike dorsal process narrow in profile, its ventral aspect slightly longer than wide. Cercus massive and wide, the inner margin produced into a projecting lobe itself divided into a large dorsal and small ventral lobe. Sclerotized rods of tenth tergite short, hooked laterally, and having a stout spur near base. Aedeagus complex; its base short and angular, bearing a pair of dorsal, fingerlike, setate processes; eversible part forming a sclerotized tube produced into a tonguelike ventral projection; lateral arms slender and moderately sharply deflected toward apex.

Holotype male: John Rogers Cave, 1.6 miles ESE Hisel, Jackson Co., Kentucky, 20 May, 1964, T. C. Barr; in aphotic zone crawling beside stream on silt.

¹ This work has been supported by a research grant from the National Science Foundation.



FIGS. 1-3. Male genitalia of *Polycentropus*. A, lateral view of genital capsule; B, ventral aspect of claspers; C, widest face of basal process of clasper; D, lateral aspect of aedeagus; E, dorsal aspect of tenth tergite. c, cercus; cl, clasper.

This species is closely related only to *P. colei* Ross from which it differs in the narrower claspers, different shape of the cercus, the large lateral tooth on the lobes of the tenth tergite, and the shorter basal part of the aedeagus. In the original description of *P. colei* the expanded aedeagus was not drawn; this part is here illustrated for comparison, Fig. 2.

We take great pleasure in naming this unique species in honor of its collector, the ardent speleologist, Dr. T. C. Barr.

***Polycentropus chelatus*, new species**

Male genitalia as in Fig. 3. Ninth sternite massive and wide. Clasper with ventral body short, basal process high and large, lateral aspect chelate, ventral aspect of basal portion tapering gradually to a blunt apex; widest face of basal process with sessile base, rounded rugose mesal lobe, and elongate, fingerlike, rounded apex. Cercus with basal portion elliptic, its lateral edge produced posteriorly so that it completely hides the mesal lobe when viewed laterally. Aedeagus short and sinuate.

Holotype male: Sugar Tree, Decatur Co., Tennessee, along Kentucky Lake, tributary of Morgan Creek, 5 May, 1958, Ross *et al.* Adult dissected from pupal skin.

This species belongs to the *maculatus* group in which it is closely related only to *P. neiswanderi* Ross, from which it differs in the higher and longer basal process of the clasper, the elliptic base of the cercus and the much more sinuate lateral aspect of the aedeagus.

***Polycentropus chenoides*, new species**

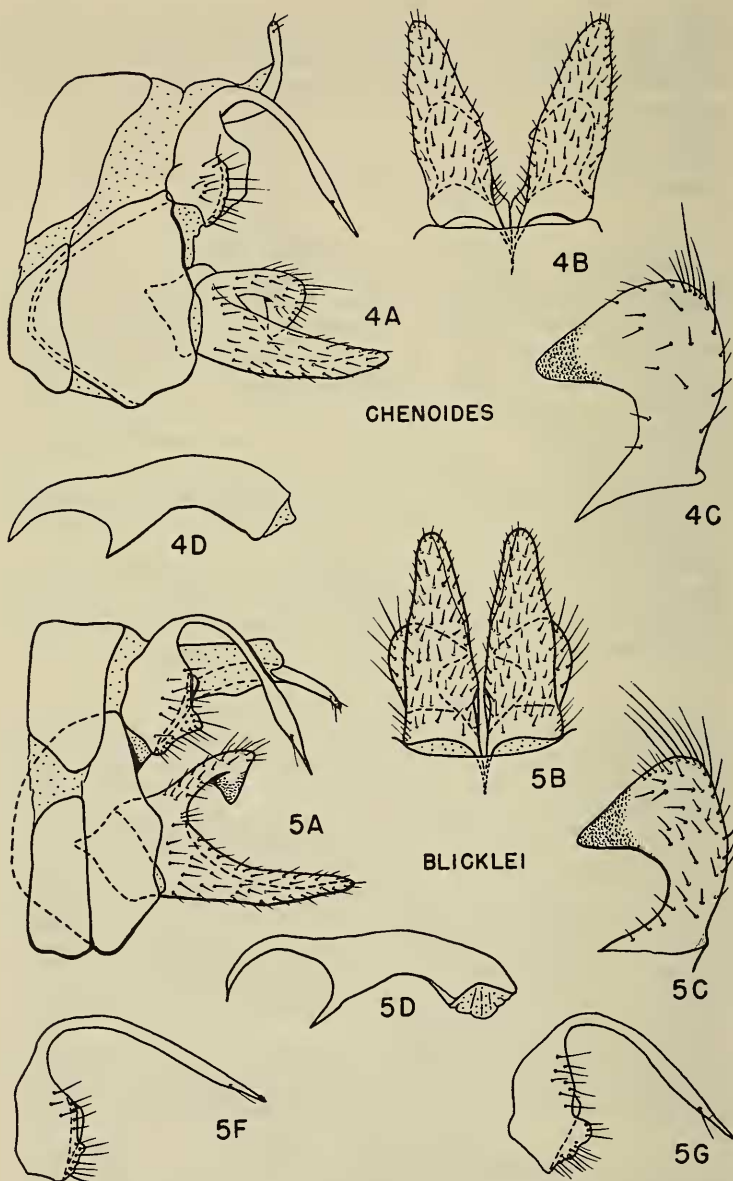
Male genitalia as in Fig. 4. Ninth sternite massive and unusually wide. Clasper with ventral portion moderately long, its lateral aspect tapering gradually to apex, its ventral aspect parallel-sided to about middle, then gradually tapering to a blunt apex; basal lobe moderately short, with a fairly long narrow base, the apex expanded into a broad mesal lobe having a rugose mesal point, its flat surface resembling a goose's head, the whole structure deflected so that its point is below the dorsal profile of the clasper body. Cercus with basal portion short and wide, the mesal lobe extending a considerable distance beyond the ridge marking the lateral portion. Aedeagus simple and slightly curved.

Holotype male: Oriente, Long Island, New York, 13 May 1947, no. 26341 Roy Lathan.

Another member of the *maculatus* group, this species is most closely related to *P. maculatus* Banks, differing especially in the wide, projecting mesal portion of the cercus and the deflected basal lobe of the clasper.

***Polycentropus blicklei*, new species**

Genitalia as in Fig. 5. Ninth sternite large and deep. Clasper with ventral portion long and tapering evenly from both lateral and ventral views; basal process fairly long, and projecting considerably above



clasper body, its produced face with a moderately long, narrow stalk, the apical portion produced into a pointed mesal lobe ending in a rugose area. Cercus with basal portion fairly broad, mesal lobe mostly hidden behind lateral lobe, the latter with a posterior projection near middle. Aedeagus tubular and only slightly curved.

Holotype male (described above): Plymouth, New Hampshire, 6 August 1947, R. L. Blickle and W. J. Morse. *Paratypes*: Lee, New Hampshire, 7 July 1951, W. J. Morse, 1 male; Wall Doxey State Park, Holly Springs, Mississippi, 21 May 1957, H. H. Ross and L. J. Stannard, 1 male.

This species also belongs to the *maculatus* group; from *P. elarus* Ross, which it resembles in clasper proportions and somewhat in shape of aedeagus, it differs in the tapering clasper body and wider apex of the clasper process; from *P. maculatus*, which it resembles in the shape of the dorsal process of the clasper, it differs in the straighter aedeagus, narrower clasper and shape of the cercus. The type series shows variations in the width of the basal part of the cercus. In the holotype, Fig. 5A, the structure is unusually wide; in the Lee, N. H. specimen, Fig. 5F, the base is only moderately wide, and in the Mississippi paratype, Fig. 5G, the cercus is almost midway between the two New Hampshire specimens.

Although collections of the *maculatus* group are not sufficiently numerous to place much reliance on negative records, nevertheless, the description of these three specimens suggests strongly that the main range of the species is at present in the northeastern states and that the Mississippi record represents a relict population that may have reached the area during cooler periods of the Pleistocene. This supposition is heightened by the fact that the Mississippi specimen was collected at a small, cold, spring-fed stream issuing from sandstone strata in Wall Doxey State Park.

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FIGS. 4, 5. Male genitalia of *Polycentropus*. A, lateral view of genital capsule; B, ventral aspect of claspers; C, widest face of basal process of clasper; D, lateral aspect of aedeagus; F, G, lateral aspect of cercus F of paratype from Lee, New Hampshire, G of paratype from Holly Springs, Mississippi.